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Hæmoptysis.



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Hæmoptysis.

This disease is defined a spitting of blood, but is generally understood to be a hæmorrhage from the lungs, trachea, or fauces; characterised by coughing up fluids, or frothy blood, usually preceded by heat, or pain in the chest, irritation in the larynx, and a salish taste in the mouth.

It may be easily distinguished from hæmatemesis, the only disease, or variety of hæmorrhage it is likely to be confounded with; as this disease consists in a vomiting of blood, usually preceded by a sense of weight, pain, or anxiety in the region of the stomach; unaccompanied by any cough, and is discharged in very considerable quantities, of a dark colour, and somewhat gumous, mixed with the other contents of the stomach.

The causes of hæmorrhage generally may occasion hæmoptysis, yet there are peculiarities, which more particularly conduce to this event; as a narrow thorax, prominent shoulders, a long neck, aciculate form, and sanguine temperament, a scrupulous habit &c.

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These predispositions may be excited into action by a variety of causes; as long and loud speaking, or singing; sudden bursts of laughter; violent paroxysms of anger; great exertions, especially raising heavy weights; vicissitudes of weather, producing coughs; irregular habits of living; suppression of some customary discharge, as the hæmorrhoids, or menses &c. The bleeding happens very frequently at night, when there is the least corporeal or mental excitement, owing to the horizontal position of the body, and more particularly to the bending of the lower extremities, as this position increases the determination of blood to the lungs.

There are several varieties of hæmoptysis, arising from different causes, and attended with various degrees of danger; which vary much according upon the state of the lungs at the time, as it is not always to be considered as a primary disease, being often only a symptom or effect; and in several diseases, such as pleurisy, peripneumonias, and many fevers, it

presence, is a happy presage of a favourable termination.

1st It may proceed from the accidental rupture of a vessel, either by a fall, a blow, or a wound. If the vessel is small, and no previous disease exists in the lungs, there is little or no danger, seldom taking place to such a degree as to prove fatal; but when it does, the effusion must be from some large vessel.

2nd From specific inflammation of the lungs.

3rd From Metastasis, or translation from some other part, as in suppuration of hemorrhoids, menues &c.

4th From more plethora, or topical congestion in the lungs, which is relieved by periodical discharges.

These cases are not necessarily connected with general plethora, they are as often met with in the thin and valitudinarian.

5th From an abscess, or ulcer in the lungs, generally following its cause pneumonia, the blood being mixed with phlegm, or purulent matter, which sometimes submits to a judicious treatment.

6th. From tubercles, associated usually with the scrofulous diathesis, which proves fatal by ending in consumption.

When proceeding from the trachea or fauces, we may sometimes, on examination, discover the source from which the hemorrhage flows. It is then discharged by a man hawking, without any pain, cough, oppression, or febrile excitement; though sometimes a bleeding from the trachea is of very serious import demanding the utmost care.

Hemorrhage is improperly divided into active, and passive, the term passive being only used conventionally; yet in treating of hemoptysis, it is necessary, first, to notice the more active form of the disease, which is ushered in by a sense of weight and oppression, and sometimes of slight pain, or burning in the chest, or under the sternum; a hard dry cough; some shortness, and difficulty of breathing, and a tickling sensation in the fauces, with a

full irregular pulse, and flushed countenance. It is sometimes attended with fever, commencing with chills, cold extremities, pain in the back and loins, distended stomach, constipated bowels, and flatulency, followed by heat, and excrement. Not unfrequently indeed, cases have occurred, in which all the laws of intermission were observed; chills appearing with periodical regularity, and during the hot stage effusions of blood taking place, continuing in this way for days or even weeks.

There is a difference in the mode, as well as the quantity of the blood discharged; sometimes being thrown up in a very small portion, attended by a rattling in the trachea, as though the tube was nearly filled with phlegm; preceded by a salivaceous taste in the mouth, by much irritation about the larynx, with an irresistible propensity to cough, terminating with a discharge of a single ment. ful, or enduring a considerable length of time, while in



other cases it is thrown up without any effort, and so copious as to appear like a stream from the mouth.

The leading indication must be to reduce vascular action; and nothing would seem more appropriate than bloodletting. Though this plan of treatment, is objected to by some, among which is the celebrated Cullen, while others limit the use of the lancet to those only of robust constitution with fulness and activity of circulation. But a large portion of the cases of hemorrhage and active hemorrhage too are attended not so much by a redundancy of blood, as unequal distribution of it, and this may happen in individuals weak, and valvularinary.

The lungs in this disease are greatly disposed to take on inflammation; indeed the phenomena of active hemorrhage bear a strong analogy to inflammation, the difference principally consisting in the state of the capillary vessels at the time. In the former condition they are relaxed at once but the

The first part of the paper is devoted to a discussion of the
 various methods which have been proposed for the determination of
 the rate of reaction between a solid and a liquid. It is shown that
 the most reliable method is that of measuring the change in the
 weight of the solid as the reaction proceeds. This method is
 applicable to all cases in which the solid is insoluble in the
 liquid, and it is the only method which gives a direct measure
 of the rate of reaction. The other methods, such as the
 measurement of the volume of gas evolved, or the change in the
 viscosity of the liquid, are only applicable to special cases, and
 they are liable to considerable errors.

In the second part of the paper, the author discusses the
 factors which influence the rate of reaction between a solid and a
 liquid. It is shown that the rate of reaction is affected by the
 nature of the solid, the nature of the liquid, the temperature, and
 the surface area of the solid. The effect of each of these factors
 is discussed in detail, and it is shown that the rate of reaction
 increases with the surface area of the solid, with the temperature,
 and with the concentration of the liquid.

The third part of the paper is devoted to a discussion of the
 mechanism of the reaction between a solid and a liquid. It is
 shown that the reaction proceeds in a series of steps, and that
 the rate of reaction is determined by the slowest of these steps.
 The author proposes a mechanism for the reaction, and it is shown
 that this mechanism is in agreement with the experimental facts.

effusion, while in the latter, by a more tedious pro-
cess, serum, coagulable lymph, a pus is formed.
In either case it is an appropriate remedy, by remo-
ving topical congestion, and restoring an equilib-
rium to the circulation; thus by opening a vein
in any other part of the body, thereby inviting
a flow of blood to it, on the principle of reflexion
the hemorrhage will generally cease. To be effec-
tual in the more violent cases, the detraction
should be large, as small and repeated bleedings
will prove utterly unavailing; tending more to har-
ass and debilitate the patient, than afford him
any relief. In such cases we should at once draw a
sufficient quantity to make a decided impression
as nothing short will answer.

As soon as a decided impression has been made
by it, or even during the operation, should the
danger be great, we may direct camomile, in
substance, to be administered, in doses of a tea-



- from full or near even 10, 15. or 20 minutes. & in ac-
tion it excites being induced by sympathy to the lungs
apists in closing the tracheal mouths of the exhalants.
As an auxiliary to the above, should the case de-
mand it we may safely resort to cold applications
to the thorax, more particularly to the arm pits.
The practice of immersion, or wrapping the whole torso
in cloths wet with cold water, or vinegar, appears to
be fraught with danger; inasmuch as the parts
concerned, already pre-disposed to inflammation,
may be excited to subsequent Catarrh, or, pneumo-
nia, laying the foundation for Phthisis pulmonalis.

The above treatment will not always prove ef-
fectual. In such cases after a pleurisy has been
induced as long as there was rigor in the circula-
tion, the *Liocochlearia Salurni*, purgula admin-
istered, will sometimes produce the happiest effects.
It should be given in doses of 2, or 3 grains, with a
small portion of opium, at longer or shorter inter-



as the case may demand. It will not al-
ways restrain a large stream of blood, and will
always prove inefficient, and sometimes detrimen-
tal unless preceded by bl. at least when action
of pulse exists during the hemorrhage, especially
in hemiplegia. This medicine was for a long time
discarded from practice, from the difference paid
to the authority of Boerhaave, Stahl, and Hoffman.
In the progress of time, however its reputation was
again restored, by the late Dr. Barton, and is now
considered as a valuable article in the Materia Medica.
Dr. Barton, and Dr. Moser have also spoken high-
ly of the Villous solution, in Hemiplegia.

As quiet irritation and subdue vascular action
is their supposed sedative influence, the Narcotics
have been recommended in this disease by some
practitioners. —

Opium has been much employed in hemorrhage,
and is said to be exceedingly beneficial in those

proceeding from the uterus. Its administration in the early stage of hemoptysis, ought to be confined, to those cases only where great irritation of the lungs, is attended by spasmodic cough &c. After the force of the circulation is reduced, in active pulmonary hemorrhage, or in cases of originally opposite character, it then becomes, an appropriate remedy to allay irritation and remove spasmodic cough &c.

From its known sedative influence, Digitalis has been extolled in this disease; but is only applicable in those cases, where depletion by the lancet, is indispensable: such as an habitual hæmoptoe, attended by cough, pain, a quick, and sometimes active pulse, with considerable mobility, and weakness. In general, it is much inferior to the

Emetics have been used in checking hæmoptysis, particularly by Bryan Robinson of Dublin, and also by Dr. Willis, who avows that the lengthened experience of nearly half a century, taught him to

The first of these is the fact that the
 system is not self-sufficient. It is
 dependent on the outside world for
 many of its needs. This is a serious
 weakness, and it is one which must
 be remedied if the system is to
 be successful. The second is the fact
 that the system is not flexible. It
 is rigid and inflexible, and it is
 unable to adapt to changing
 circumstances. This is another serious
 weakness, and it is one which must
 be remedied if the system is to
 be successful. The third is the fact
 that the system is not efficient. It
 is wasteful and inefficient, and it
 is unable to make the most of its
 resources. This is another serious
 weakness, and it is one which must
 be remedied if the system is to
 be successful.

confide in them above every other remedy, they being
safe and efficacious. The practice however seems
to have been altogether abandoned from its suppo-
sed toxicity, and is now deemed hazardous, except
under urgent circumstances, when the ordinary
remedies have failed: and especially so, when the
hemorrhage is copious, from the rupture of a large
vessel. In cases of an opposite character when
the discharge is small, mixed with the matter
expectorated from tuberculated lungs they may
be administered with safety and advantage. Solie
himself, has in some instances very promptly suppres-
sed hemorrhage from the lungs, especially when
spontaneously induced.

The great advantage to be derived from this
class of remedies in deranged action, is more generally
acknowledged. They should not be administered how-
ever, in cases proceeding from ruptured vessels.
Spicaeuana is considered the best, and should be



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given in grain, or half grain doses with the addition of the $\frac{1}{4}$ of a grain of opium, repeated, at longer or shorter intervals in order to create a slight distention of stomach; this impulsion should be maintained a considerable length of time. Tartar Emetic. is more applicable to those cases attended with high fever.

Several other articles have been recommended and employed by different practitioners, in the treatment of remission; many of which are perfectly inadequate to the end in view. We must not however neglect the use of purgatives. Whether we regard the reduction of vascular action, or the removal of irritation, induced by constipated bowels, cathartics constitute a most important remedy, and should be early resorted to. The saline are considered the best of which, Epsom is the most preferable. When the stomach will bear it the Oleum Ricini, will answer a good purpose.

The contents of the prima via being much vitiated,

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as is indicated by jaund tongue, melted secretions, con-
stipation &c. cathartics of a different character seem
 requisite. And in such circumstances Rhubarb, is ap-
 propriate; though the Blue pill, is better, con-
 forme to the directions of Dr. Boerhaave, given in doses
 of 3 grains at night, and worked off, in the morning,
 by some mild cathartic, will be more effectual.

Cooperating with the foregoing general plan
 of treatment, local applications, may sometimes be
 resorted to, or indeed become necessary, as dry cups
 &c. in the chest. When we find the haemorrhage con-
 tinue, or even when a tendency to it exists, the latter
 article, may be usefully applied to the chest.

Though the best course to be pursued, for the sup-
 pression of active haemoptysis, has been detailed,
 yet vain, and ineffectual, may all our efforts prove,
 unless due attention, is bestowed to other circumstan-
 ces connected with the case; in order therefore, that
 they may harmonize with the general plan of

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treatment, the patient should be immediately placed in bed, with his shoulders slightly elevated, and his lower extremities extended; perfect rest enjoined; his chamber cool, and well ventilated; and compound geladae, not suffering him to converse. His diet must consist of small quantities of demulcent drinks, aquea et acidulata and drank cold.

In place of active hæmoptysis, we sometimes meet with cases of a very opposite condition of the system. These are denominated passive hæmorrhages, or with more propriety hæmorrhages of passive action; in which the capillary vessels of the lungs, become incapable of performing their wonted secretory office, suffering the arterial blood to pass from their pulsations into the unchanged in its character. This condition of system is found in the weak and balatundary, and especially those of scrupulous undancy. There is in this variety of hæmon

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have a slight cough, quick pulse, soft skin, sal-
low countenance, and hectic flush, the blood be-
ing discharged, in streaks on the sputa, some-
times copiously.

The leading indication is evidently, first, to
check the hemorrhage, by any, or all of the fore-
going means, except I. B. for which local bleeding
may be substituted, if necessary. Secondly to sup-
port the system, and through it, impart tone and
strength to the vessels of the lungs.

Prussian bark alone, or combined with myrrh,
or the chalybeates is good, the latter combination
more especially. The Murex tincture of iron, may
also be used, though the sulphate, answers well.

spirit of Turpentine in doses of 30 to 40 gtt. every
half hour, will sometimes check it. Hence
the Alumen, may be used, though the saccharum
salinum now becomes a more appropriate rem-
edy being greatly superior to it.

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Not much advantage is to be derived from the vegetable astringents, as *hem. catechu* &c. Much however may be expected from the mineral acids, they being more appropriate in this, than in active hæmorrhage from the lungs. Either the nitric or sulphuric may be given, the latter answering best to suppress the bleeding, and the former to rectify the morbid condition with which it may be connected.

The patient should make use of a mild, nourishing diet, as milk, eggs &c. and use such ~~mineral~~ drinks as have a corroborant effect, such as malt liquors.

When alone constituted the principal medicine of the patient to this form of the disease, the remedial effect of which, may be aided by the habitual use of exercise, especially on horseback, just preceding the patient by the proper reduction of vascular action.

To guard against frequent repetitions of the hæmorrhage, a system of prophylactic instruction

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should be enjoined. — 1st The patient must carefully avoid every cause that will tend to increase the activity of the circulation, by using the gentlest exercise, and mildest food, with a perfect abstinence from every excess.

2nd He must avoid taking cold, as it will prove more obstinate when induced by catarrh, and the consequences are more dangerous.

3rd The state of the pulse, and respiration must be guarded, and activity of circulation, with either pain, or oppression removed without delay, by the appropriate remedies, as small bleedings, opiates, low diet, rest, cooling applications, and the whole a strict antiphlogistic plan.

4. In obstinate cases, a salivation should be tried, though this should not be attempted, when dependent upon a tuberculated state of the lungs. Emetics frequently applied in this latter condition are entitled to much confidence, acting as divertents.

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Haemoptysis, appears to be a salutary process intended by nature to remove superfluous topical congestion, and hence it becomes an extremely interesting subject to the medical practitioner.

He is by no means to attend exclusively to the mere bleeding, as the nature of the cause which induced it, and the dangerous consequences to be anticipated from its frequent occurrence, each demand the exercise of his judgement, founded on correct anatomical knowledge, and timely interference of his skill.

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Feb. 3. 1829

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246 Race St.

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